What is claimed is:

1. A method of securing an acetabular cup to an acetabulum so as to provide a bearing surface for a head portion of a femur, comprising the steps of:

reaming a hemispherically-shaped cavity into said acetabulum with a reamer, wherein said reamer includes a hemispherically-shaped cutting head; and

press fitting said acetabular cup into said cavity reamed into said acetabulum, wherein (i) said acetabular cup includes a cup body having a substantially constant radius sidewall which extends outwardly from an apex to an annular rim, (ii) said sidewall defines an imaginary hemisphere with an outer face of said annular rim defining a segmental plane which intersects said imaginary hemisphere, (iii) said segmental plane is parallel to a great circle of said imaginary hemisphere, (iv) said segmental plane is separated from said great circle of said imaginary hemisphere by a distance D, and (v) 0.5 millimeters ≤ D ≤ 2.0 millimeters.

2. The method of claim 1, wherein D is approximately one (1) millimeter.

3. The method of claim 1, wherein:

said hemispherically-shaped cutting head of said reamer has a first radius,

said reaming step includes the step of reaming said acetabulum such that said cavity possesses said first radius,

said imaginary hemisphere defined by said sidewall of said cup body has a second radius, and

said second radius is greater than said first radius.

4. The method of claim 3, wherein said second radius is between one-half (½) and one and one-half (1½) millimeters greater than said first radius.

5. The method of claim 3, wherein said second radius is approximately two (2) millimeters greater than said first radius.

6. The method of claim 1, further comprising the step of positioning a bearing insert into said acetabular cup, wherein said bearing insert is configured to accept therein said head portion of said femur when said bearing insert is positioned in said acetabular cup.

7. The method of claim 1, wherein said press fitting step includes the step of advancing said acetabular cup into said cavity reamed into said acetabulum until said outer surface of said annular rim is substantially flush with a distal surface of said acetabulum.

8. A prosthetic hip assembly for replacing a natural bearing surface of an acetabulum with an artificial bearing surface adapted to cooperate with a head portion of a femur, said prosthetic hip assembly comprising:

a hemispherically-shaped reamer adapted to ream a hemispherically-shaped cavity into said acetabulum, said reamer including a hemispherically-shaped cutting head; and

an acetabular cup adapted to be press fit into said cavity reamed into said acetabulum, wherein (i) said acetabular cup includes a cup body having a substantially constant radius sidewall which extends outwardly from an apex to an annular rim, (ii) said sidewall defines an imaginary hemisphere with an outer face of said annular rim defining a segmental plane which intersects said imaginary hemisphere, (iii) said segmental plane is parallel to a great circle of said imaginary hemisphere, (iv) said segmental plane is separated from said great circle of said imaginary hemisphere by a distance D, and (v) 0.5 millimeters $\leq$ D $\leq$ 2.0 millimeters.

9. The assembly of claim 8, wherein D is approximately one (1) millimeter.

10. The assembly of claim 8, wherein:

said hemispherically-shaped cutting head of said reamer has a first radius,

said imaginary hemisphere defined by said sidewall of said cup body has a second radius, and

said second radius is greater than said first radius.

11. The assembly of claim 10, wherein said second radius is between one-half (½) and one and one-half (1½) millimeters greater than said first radius.

12. The assembly of claim 10, wherein said second radius is approximately two (2) millimeters greater than said first radius.

13. The assembly of claim 8, further comprising a bearing insert, wherein:

said bearing insert is adapted to be positioned into said acetabular cup, and

said bearing insert is configured to accept therein said head portion of said femur when said bearing insert is positioned in said acetabular cup.

14. The assembly of claim 8, wherein said outer surface of said annular rim of said acetabular cup is substantially flush with a distal surface of said acetabulum when said acetabular cup is press fit into said cavity reamed into said acetabulum.

15. A method of securing an acetabular cup to an acetabulum, said acetabular cup having a bearing surface adapted to receive a head portion of a femur, comprising the steps of:

reaming a hemispherically-shaped cavity having a first radius into said acetabulum with a reamer, wherein said reamer includes a hemispherically-shaped cutting head which possesses said first radius; and

press fitting said acetabular cup into said cavity reamed into said acetabulum, wherein (i) said acetabular cup includes a cup body having a substantially constant radius sidewall which extends outwardly from an apex to an annular rim, (ii) said sidewall defines an imaginary hemisphere having a second radius, (iii) said second radius is greater than said first radius, (iv) an outer face of said annular rim of said cup body defines a segmental plane which intersects said imaginary hemisphere, (v) said segmental plane is parallel to a great circle of said imaginary hemisphere, (vi) said segmental plane is separated from said great circle of said imaginary hemisphere by a distance D, (vii) 0.5 millimeters $\leq$ D $\leq$ 2.0 millimeters.

16. The method of claim 15, wherein D is approximately one (1) millimeter.

17. The method of claim 15, wherein said second radius is between one-half (½) and one and one-half (1½) millimeters greater than said first radius.

18. The method of claim 15, wherein said second radius is approximately two (2) millimeters greater than said first radius.

19. The method of claim 15, further comprising the step of positioning a bearing insert into said acetabular cup, wherein said bearing insert is configured to accept therein said head portion of said femur when said bearing insert is positioned in said acetabular cup.

20. The method of claim 15, wherein said press fitting step includes the step of advancing said acetabular cup into said cavity reamed into said acetabulum until said outer surface of said annular rim is substantially flush with a distal surface of said acetabulum.

21. A method of securing an acetabular cup to an acetabulum so as to provide a bearing surface for a head portion of a femur, comprising the steps of:

reaming a hemispherically-shaped cavity into said acetabulum with a reamer; and

press fitting said acetabular cup into said cavity reamed into said acetabulum, wherein (i) said acetabular cup includes a cup body having (a) an outer rim, and (b) a sidewall which defines an imaginary hemisphere having a great circle, (ii) all points located on said sidewall are separated from a center point of said great circle by a substantially equal distance R, (iii) all points located on a peripheral edge of said outer rim are separated from said great circle of said imaginary hemisphere by a distance D, and (iv) 0.5 millimeters $\leq$ D $\leq$ 2.0 millimeters.

22. The method of claim 21, wherein D is approximately one (1.0) millimeter.

23. The method of claim 21, wherein:

said reamer includes a hemispherically-shaped cutting head,

said hemispherically-shaped cutting head of said reamer has a first radius,

said reaming step includes the step of reaming said acetabulum such that said cavity possesses said first radius,

said imaginary hemisphere defined by said sidewall of said cup body has a second radius which is equal to said distance R, and

said second radius is greater than said first radius.

24. The method of claim 23, wherein said second radius is between one-half (½) and one and one-half (1½) millimeters greater than said first radius.

25. The method of claim 23, wherein said second radius is approximately two (2) millimeters greater than said first radius.

26. A prosthetic hip assembly for replacing a natural bearing surface of an acetabulum with an artificial bearing surface adapted to cooperate with a head portion of a femur, said prosthetic hip assembly comprising:

a hemispherically-shaped reamer adapted to ream a hemispherically-shaped cavity into said acetabulum; and

an acetabular cup adapted to be press fit into said cavity reamed into said acetabulum, wherein (i) said acetabular cup includes a cup body having (a) an outer rim, and (b) a sidewall which defines an imaginary hemisphere having a great circle, (ii) all points located on said sidewall are separated from a center point of said great circle by a substantially equal distance R, (iii) all points located on a peripheral edge of said outer rim are separated from said great circle of said imaginary hemisphere by a distance D, and (iv) 0.5 millimeters $\leq$ D $\leq$ 2.0 millimeters.

27. The assembly of claim 26, wherein D is approximately one (1) millimeter.

28. The assembly of claim 26, wherein:

said reamer includes a hemispherically-shaped cutting head,

said hemispherically-shaped cutting head of said reamer has a first radius,

said imaginary hemisphere defined by said sidewall of said cup body has a second radius which is equal to said distance R, and

said second radius is greater than said first radius.

29. The assembly of claim 28, wherein said second radius is between one-half (½) and one and one-half (1½) millimeters greater than said first radius.

30. The assembly of claim 28, wherein said second radius is approximately two (2) millimeters greater than said first radius.